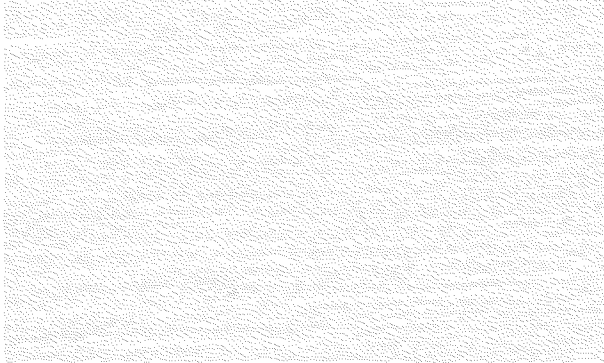


To: Jenkins, Laura Flynn[Jenkins.Laura@epa.gov]
Cc: Grantham, Nancy[Grantham.Nancy@epa.gov]
From: Smith, Paula
Sent: Mon 10/26/2015 11:00:59 PM
Subject: RE: GKM R8 Responses to Matt Brown (#1 - #3)



Great work Laura! Thanks for pulling the pieces together.

- Paula

From: Jenkins, Laura Flynn
Sent: Monday, October 26, 2015 4:54 PM
To: Grantham, Nancy
Cc: Smith, Paula; Stavnes, Sandra; Ostrander, David; Hestmark, Martin; Mylott, Richard
Subject: GKM R8 Responses to Matt Brown (#1 - #3)

Nancy:

Per your request, embedded below and attached as a Word doc, are responses to the three questions from Matt Brown (AP) assigned to Region 8.

These responses were vetted through Sandy Stavnes and Laura Williams, who both approved the answers.

If you need anything further, please let me know.

Regards,

Laura Jenkins

Media Officer

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Gold King Mine

Reponses to Matt Brown (AP) Questions 1 - 3

1. Further details on the decision not to use a drill rig to check water conditions inside Gold King. Specifically, please provide any cost estimate(s) of using a drill rig at the site, an explanation of how timing was a factor, details of what safety and technical issues were at play.

ANSWER: The work conducted on August 5 was preliminary to any determinations about next steps and potential ways to access the mine water. The work activity conducted that day was intended to remove loose material and expose the bedrock above the adit to inform a joint evaluation of next steps with Colorado Department of Reclamation and Mine Safety (DRMS) and a scheduled consultation with Bureau of Reclamation (BOR) on August 14. It was preliminary to any determinations on how to best address the mine water.

Given the steep terrain and difficulty of access to locations above the GKM adit, there were significant concerns about the safety, feasibility, and cost of using a rig to check the adit from above. Site conditions at GKM were far different from those at Red and

Bonita and getting an accurate measure of mine water from above would have required a consideration of significant risks and technical challenges.

Gold King mine area topography is exceptionally steep above the Level 7 portal (where release occurred) and access roads for drilling are limited and are several hundred feet above the Level 7. The complexity and cost of any project operation (including drilling) are always considered, though safety is a primary concern. As noted above, at the time of the incident, no decision had been made whether to attempt to drill into the Gold King level 7 adit. Although this procedure was performed at the Red and Bonita Mine below the Gold King Mine, the ground conditions on the slope in the immediate vicinity above the Gold King Mine portal were not as suitable as at the Red and Bonita mine to accessing with a drill rig. The access to the area above the adit at the Red and Bonita mine was feasible with a relatively short road extension above the main access road. However, even this drill pad was near failure at the time of drilling and the slope has since failed. Note, that even with a very short drilling distance (approximately 30 feet) at the Red and Bonita mine it required three attempts to hit the adit due to unreliable information on the adit orientation.

2. Regarding the Bureau of Reclamation's Technical Evaluation of the Gold King spill, pages 44 and 45 include mention of communications between the EPA OSC and BOR's Mike Gobla. The OSC apparently told Mr. Gobla he was "unsure about the plans for the Gold King Mine" and requested an outside review of the EPA? DRMS plans. Prior to a planned meeting with Mr. Gobla on Aug. 14, according to the report, work at the mine began. The report also mentions the EPA OSC going on vacation. What was the OSC unsure about? Why did the work begin prior to the planned meeting with BOR? How the OSC's upcoming vacation factor in to all this?

ANSWER: The work EPA was conducting on August 5 was intended to remove loose material and expose the bedrock above the adit to inform a joint evaluation of next steps with the State and a scheduled consultation with BOR on August 14. It was preliminary to any determinations on how to best address the mine water.

EPA's objective of the excavation work at the Gold King Mine was to expose bedrock below the eroded and unconsolidated soil and gravels on the hillside above the adit. This work was implemented so that conditions above the adit at the portal could be better observed to aid in evaluation of options and appropriate path forward to be discussed in the days to follow with the full technical team (including the scheduled consult with Bureau of Reclamation (BOR) on 8/14/15). The incident occurred while preparing the site for this consult and occurred before the consult occurred.

A borehole may have been deemed appropriate as a result of the consult, had the consult occurred and had not been ruled out. Safety is always a key consideration concerning the activities at the mine and locating a drill pad near the mine adit on very

steep, unstable terrain would be very challenging, EPA and its full team (including contractors and the State of CO) had collected and analyzed flow data, were familiar with the site topography, and had inspected the site for signs of seeps, including the area above the mine adit prior to implementing the work plan. There is no guarantee that information provided by successfully drilling a borehole into the adit would have prevented the accident from occurring or precluded a blowout from occurring in the future. In addition, building a road, constructing a drill pad, moving heavy equipment to terrain above the mine and attempting to drill into the adit could have triggered a blowout of the unconsolidated blockage in the Gold King Mine. After the Gold King incident, EPA reviewed pertinent documents, conducted interviews, and visited the site to review site conditions. EPA's Internal Review Team concluded that the blowout was likely inevitable.

The EPA OSC on-site during the incident has a Geological Engineering degree from Colorado School of Mines and 26 years of response experience with EPA including work on numerous abandoned mines involving underground workings. The DRMS member is a geological engineer with more than 25 years of experience with site specific knowledge. Collectively, the three personnel at the Gold King Mine during the incident have almost 90 years of inactive and abandoned mine investigation and response experience. Additionally, EPA contractors include staff with science and engineering backgrounds, and Region 8 consults with state partners at the Colorado Department of Public Health and the Environment and Division of Reclamation and Mine Safety who have many years of experience in mine site remediation. In conducting mining type operations, EPA uses private companies with mining engineers to conduct mine remediation work and coordinates with other federal agencies who also have this experience and academic training.

There is no federal requirement for EPA to consult with the BOR. EPA intended to consult with the full technical team including the BOR. EPA believes it is important to focus on the steps that need to be taken to help prevent similar incidents from occurring at other mining sites. EPA is reviewing the DOI report and is awaiting the report from EPA's OIG.

3. Attachment to this message is an email chain that discusses purchase of a piezometer, presumably for testing water pressure. Was this intended for use at Gold King mine? Was it obtained? Was it used? If so, what were the results? Would it be used in conjunction with drilling a bore hole or is that not necessary?

ANSWER:

The piezometer was purchased for use at the Red and Bonita site. The pressure to be measured is that of the water level that would build behind the bulkhead in the Red and Bonita, once the valve on the bulkhead is shut off.